What is claimed is:

1. A method of pitch enhancement in a speech compression system using adaptive and fixed codebooks, comprising:

calculating a pitch enhancement coefficient;

providing a fixed subcodebook comprising at least two fixed subcodebooks;

selecting a fixed subcodebook from among the at least two fixed subcodebooks; and

applying a pitch enhancement in response to the pitch enhancement coefficient and the selected fixed subcodebook, wherein the pitch enhancement coefficient is dependent on the selected fixed subcodebook.

2. The method of Claim 1, where applying a pitch enhancement further comprises calculating a pitched-enhanced signal from a codevector selected from the selected fixed subcodebook, a pitch lag, and the pitch enhancement coefficient.

3. The method of Claim 1, further comprising calculating the pitch enhancement coefficient based on a pitch gain.

4. The method of Claim 2, where the signal is calculated during a search through the fixed subcodebooks.

5. The method of Claim 1, where the signal is calculated during an iterative search through the fixed subcodebooks.

6. The method of Claim 1, where the pitch enhancement coefficient is a mathematical factor from 0.0 to 1.0.

7. The method of Claim1, where the pitch enhancement is applied both forward and backward.

8. The method of Claim 7, where the pitch enhancement coefficient is applied to pulses selected from the group consisting of forward, backward, and forward and backward pitch pulses, of a main pulse.

9. The method of Claim 8, where pitch enhancement coefficient is applied to a first power.

10. The method of Claim 8, where pitch enhancement coefficient is applied to a first power for pulses one pitch lag away from the main pulse, and the pitch enhancement coefficient are applied to a second power for pulses two lags from the main pulse.

11. The method of Claim 10 in processing for a frame classified as type 0 for a first fixed subcodebook, where the pitch enhancement coefficient is $0.75 \cdot g_{a\_m}$, where the value of $0.75 \cdot g_{a\_m}$ is constrained to be between 0.5 and 1.0, inclusive, where g_{a_m} is a quantized long term predictor gain of a previous subframe.

12. The method of Claim 10 in processing for a frame classified as type 0 for a second fixed subcodebook, where the pitch enhancement coefficient is $0.25 \cdot g_{a\_m}$ and the value of $0.25 \cdot g_{a\_m}$ is constrained to be between 0.0 and 0.5, inclusive, where g_a is a quantized long term predictor gain of a previous subframe.

13. The method of Claim 10 in processing for a frame classified as type 0 for a third fixed subcodebook, where the pitch enhancement coefficient is 0.

14. The method of Claim 10 in processing for a frame classified as H1 for a first fixed subcodebook, where the pitch enhancement coefficient is $1.0 \cdot g_a$ and the value of $1.0 \cdot g_a$ is constrained to be between 0.5 and 1.0, inclusive, where g_a is a quantized pitch gain.

15. The method of Claim 10 in processing for a frame classified as H1 for a second fixed subcodebook and a third fixed subcodebook, where the pitch enhancement coefficient is $0.5 \cdot g_a$ and the value of $0.5 \cdot g_a$ is constrained to be between 0.0 and 0.5 inclusive, where g_a is a quantized pitch gain.

16. The method of Claim 1 for a frame classified as type 0, where the steps of selecting a fixed subcodebook and calculating a signal are accomplished by using at least one factor selected from the group consisting of a pitch correlation, a residual sharpness, a noise-to-signal ratio, and a pitch lag.

17. The method of Claim 1, where the method is applied to a selectable mode vocoder (SMV) system.

18. The method of Claim 1, where the method is applied to a code-excited linear prediction (CELP) system.

19. A speech coding system using adaptive and fixed codebooks, comprising:

a pitch enhancement coefficient;

a fixed codebook comprising at least two fixed subcodebooks; and

a pitch enhancement based on the pitch enhancement coefficient and the selected fixed subcodebook, wherein the pitch enhancement coefficient is dependent on the selected fixed subcodebook.

20. The speech coding system of Claim 19, where the pitch enhancement comprises a pitch-enhanced signal calculated from a pitch lag, a codevector selected from a fixed subcodebook selected from among the at least two subcodebooks, and the pitch enhancement coefficient.

21. The speech coding system of Claim 19, where the pitch enhancement coefficient is based on a pitch gain.

22. The speech coding system of Claim 19, where the pitch-enhanced signal is calculated during a search through the subcodebooks.

23. The speech coding system of Claim 19, where the pitch-enhanced signal is calculated during an iterative search through the subcodebooks.

24. The speech coding system of Claim 19, where the pitch enhancement coefficient is a mathematical factor from 0.0 to 1.0.

25. The speech coding system of Claim 19, where the pitch enhancement is applied forward and backward.

26. The speech coding system of Claim 25, where the pitch enhancement coefficient is applied to pulses selected from the group consisting of forward, backward, and forward and backward pitch pulses of a main pulse.

27. The speech coding system of Claim 26, where the pitch enhancement coefficient is applied to a first power in calculating the signal.

28. The speech coding system of Claim 26, where the pitch enhancement coefficient is applied to a first power for pulses one pitch lag away from the main pulse, and the pitch enhancement coefficient is applied to a second power for pulses two lags from the main pulse.

29. The speech coding system of Claim 28 for a frame classified as type 0 for a first fixed subcodebook, where the pitch enhancement coefficient is $0.75 \cdot g_{a\_m}$

and the value of $0.75 \cdot g_{a\_m}$ is constrained to be between 0.5 and 1.0, inclusive, where g_{a_m} is a quantized gain of a previous subframe.

30. The speech coding system of Claim 28 for a frame classified as type 0 for a second fixed subcodebook, where the pitch enhancement coefficient is $0.25 \cdot g_{a\_m}$ and the value of $0.25 \cdot g_{a\_m}$ is constrained to be between 0.0 and 0.5, inclusive, where g_{a_m} is a quantized long term predictor gain of a previous subframe.

31. The speech coding system of Claim 28 for a frame classified as type 0 for a third fixed subcodebook, where the pitch enhancement coefficient is 0.

32. The speech coding system of Claim 28 for a frame classified as H1, for a first fixed subcodebook, where the pitch enhancement coefficient is $1.0 \cdot g_a$ and the value of $1.0 \cdot g_a$ is constrained to be between 0.5 and 1.0, inclusive, where g_a is a quantized pitch gain.

33. The speech coding system of Claim 28 for a frame classified as H1, for a second fixed subcodebook and a third fixed subcodebook, where the pitch enhancement coefficient is $0.5 \cdot g_a$ and the value of $0.5 \cdot g_a$ is constrained to be between 0.0 and 0.5 inclusive, where g_a is a quantized pitch gain.

34. The speech coding system of Claim 19 for a frame classified as type 0, where the algorithm uses at least one factor selected from the group consisting of a pitch correlation, a residual sharpness, a noise-to-signal ratio, and a pitch lag in calculating the signal.

35. The speech coding system of Claim 19, where the speech compression system is a selectable mode vocoder (SMV) system.

36. The speech coding system of Claim 19, where the speech compression system is a code excited linear prediction (CELP) system.

37. A device using the speech coding system of Claim 35, where the device is selected from the group consisting of a telephone, a mobile telephone, a cellular telephone, and a portable radio transceiver.

38. The device of Claim 35, where at least one of an encoder and a decoder are provided on a digital signal processor (DSP) chip.

39. The device of Claim 38, further comprising a communications medium interface operatively connected to provide a bitstream from the encoder to a communications medium.

40. The device of Claim 38, further comprising a signal transformation device to provide speech to the encoder.

41. The device of Claim 39, where the communications medium is one of a radio frequency, a microwave transmission, and an optical transmission.